

## EARLY ECOSYSTEM RESTORATION MONITORING PLAN REVIEW

The objective of the review is to ensure that the biological/ecological objectives and data collection and analysis approach is adequately presented for all projects. The purpose of clarifying this information, on an individual project basis, is to provide input into the adaptive management decision process (i.e., what do we expect to learn) and to enhance reporting to management on project effectiveness. The presentation of information, as presented below, will also be used as a guide/protocol for future projects and their associated monitoring plans.

The monitoring/data collection and analysis methodology plan must include the following items:

### Project and Monitoring Objectives

(including the primary biological/ecological objectives, questions to be answered, hypotheses, assumptions, conceptual framework/models, etc.)

### Monitoring Approach and Design Methodology, with supportive rationale

(including duration, frequency, type of equipment, constituents, locations, integration with other projects, etc.)

(provide references or copies of protocols being followed)

### Data Sampling Procedures

(including number and type of samples, handling, preservation, storage, analytical techniques, data synthesis and analysis)

### Analysis and Reporting

(including report frequency, content and format; evaluation approach, use of peer review; metadata, data management and format; etc.)

The level of detail will depend on the nature and status of the project, but all projects will need to provide the above information in some way and to some degree. Note that a separate monitoring plan may not be necessary for some projects, such as a research project where the scope of work may serve as the monitoring/data collection plan. The plan needs to be developed prior to any data collection, including pre-project field work. The plan may be tentative in the early stages, dependent on early field surveys and evaluations. A feasibility study would present more general statements on methodology. As final designs are developed, so too would the project develop and present final details of the monitoring/data collection methodology. If existing data has or is going to be utilized, then summary/references are appropriate.

To accommodate reporting to management, a summary table is requested, showing the specific biological/ecological objectives of the project, the hypotheses related to those objectives, and the data collection/analysis methods to be used to evaluate the stated hypotheses, and thus to measure progress toward the achieving the objectives.

Note also that the timing of this request for monitoring plan information is not ideal; this information should have been sought and provided prior to developing the project scope of work. Hence, our approach is to work cooperatively and reasonably with each project proponent to maintain schedule and implementation budget to achieve the goals of the review.